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MOTIVATIONAL IMPLICATIONS OF INDIVIDUAL DIFFERENCES IN COMPETENCE.

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SELF-JUDGMENTS OF COMPETENCE VARY GREATLY. COMPETENCE JUDGMENTS ARE IMPORTANT IN TESTING THE THEORY OF ACHIEVEMENT MOTIVATION. APPLICATION OF THIS THEORY REQUIRES ACCURATE CONTROL OR ASSESSMENT OF THE SUBJECTIVE PROBABILITIES IN AN INDIVIDUAL'S COMPETENCE JUDGMENTS. SUBJECTIVE PROBABILITIES ARE OF TWO TYPES--(1) SUBJECTIVE PROBABILITY OF SUCCESS, AND (2) CONSENSUAL DIFFICULTY LEVEL OR GENERALIZED JUDGMENTS ABOUT DIFFICULTY. VARIOUS TECHNIQUES FOR ELIMINATING OR CONTROLLING INDIVIDUAL COMPETENCE JUDGMENTS HAVE BEEN DEVISED. IN ONE METHOD, THE SUBJECT STATES HIS PROBABILITY OF SUCCESS FOR THE TASK. IN ANOTHER METHOD, THE SUBJECT IS GIVEN AN ASSESSMENT OF HIS COMPETENCE PRIOR TO PERFORMANCE OF THE TASK. SOME RESEARCH STUDIES HAVE SHOWN THAT THE COMPETENCE VARIABLE IS RELEVANT IN MEASURING ACHIEVEMENT MOTIVATION. THIS TOPIC REQUIRES FURTHER INVESTIGATION. EXTRINSIC INCENTIVES SUCH AS SOCIAL APPROVAL AND PRESTIGE ALSO PLAY A ROLE IN THE COMPETENCE VARIABLE. THE TENDENCY TO PERFORM AN ACHIEVEMENT RELATED ACT WILL INCREASE AS A FUNCTION OF CONSENSUAL DIFFICULTY LEVEL. COMPETENCE IS IMPORTANT, MEASURABLE, AND CAN BE USED TO ASSESS THE RELATIONSHIP BETWEEN EXTERNAL DEFINITION OF DIFFICULTY LEVEL AND SUBJECTIVE PROBABILITIES. THIS PAPER WAS PRESENTED AT THE AMERICAN PSYCHOLOGICAL ASSOCIATION CONVENTION, WASHINGTON, D.C., SEPTEMBER 1967. (SK)

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Motivational Implications of Individual Differences in Competence

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People differ widely in terms of the degree to which they believe themselves to possess various abilities. That is, we consider ourselves to be relatively well equipped to deal with some kinds of skilled tasks and less well equipped to deal with others. I refer to these beliefs as competence judgments. They should be correlated with but not identical to actual abilities as measured. I will talk about some of the effects of these differences in self ratings on attempts to test the theory of achievement motivation as it is currently stated.

Any meaningful application of the theory depends on an accurate control or assessment of the subjective probability variable and techniques for meeting this requirement have been numerous and varied. An understanding of the problems involved in these techniques and of the other points I'd like to make depends on a distinction between two kinds of difficulty level. First is the individual's subjective judgment as to the likelihood that he can succeed on a given achievement task. This is the Ps or subjective probability of success variable in the current theory. Judgments can also be made about the difficulty level of tasks in more general terms, e.g., how difficult the task is for the average man or what proportion of a given population can succeed. Thus, for example, the farther away subjects stand from a target in a dart-throwing experiment, the smaller the proportion who can be expected to hit the target. Similarly,

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occupations can be ranked with a high degree of inter-judge reliability with respect to the proportion of the population who has the requisite ability. I call these generalized judgments about difficulty level consensual difficulty. Typically given a set of achievement tasks, subjective probability value ranks will fall in at least roughly the same order as obtains for the consensual difficulty dimension. However, and this is a basic point in my argument, though the ordering may be the same, the locations of the range of subjective probability values can fall at quite different points along the consensual difficulty dimension depending on competence, i.e., the degree to which the individual believes he possesses the skills necessary for successful performance on the tasks of the type involved. For example, if one believes himself to be very good at a particular kind of task, he may have a high Ps on tasks for which only a small proportion of the population can be expected to succeed.

These competence differences can and have created difficulties in applications of the theory of achievement motivation. If we present subjects with tasks which vary in consensual difficulty level, we have no way of being sure as to what Ps values are generated. Obviously results can be distorted seriously by this factor. Adding to the importance of these considerations is the fact that competence judgments and achievement motives may be interrelated. Several studies by Feather, a study by Brody, and data recently gathered by Shrable and myself offer evidence showing that achievement motives are related to subjective probability of success. That is, given most kinds of information about difficulty level, such as distance from the target in a dart-throwing experiment, or the proportion of the population who can succeed, etc., Ps tends to be correlated positively with measures of the motive to approach success (called Ms) and to be correlated negatively with measures of the motive to avoid failure (called Mf). Thus when criterion differences between motive groups are examined, differences

obtained may reflect Ps differences rather than being an expression of the motive differences presumably under investigation. Precisely this set of events has been postulated to account for some anomalous results in previous research. Smith showed, for example, that predictions from the theory about degree of persistence on a final exam were borne out only when intelligence used as a measure of relative competence was taken into account.

There are various techniques for eliminating or controlling problems created by individual differences in competence. Actual frequency of success or failure can be controlled or assessed in an experimental situation and subsequent strength of tendencies can be examined. Potential problems with this technique are suggested by recent work by Feather who has shown that when these sequences of success and failure are in marked contrast to initial expectancies, performance level is affected in ways which may obscure a test of the current theory. Weiner's work also would suggest that inertial tendency effects would complicate the use of this technique. Another possible technique is simply asking Ss to state their own probability of success with respect to tasks. We have some evidence for the usefulness of this approach though other results suggest that introspection about the Ps values of tasks creates special circumstances which we do not as yet understand.

In another attack on this problem I devised an experimental situation in which the effects of motive-related competence differences were apparently reduced to a minimum. I attempted to convince subjects that an accurate assessment of their competence with respect to tasks used had been made, and that data presented on task difficulty represented an accurate statement of their own Ps for the tasks. With this technique, on two occasions, the prediction that subjects for whom Ms exceeds Mf would show a relatively greater preference for tasks of intermediate difficulty than would subjects of the opposite motive pattern was

clearly confirmed. In another experimental condition similar to the first except that information about ability level did not preclude the influence of competence differences, the pattern of results could not be dealt with by the theory unless the influence of motive-related differences in competence was assumed.

Another approach to the problem of control of competence differences is to attempt to assess inter- and intra-individual differences in competence with respect to the general class of achievement tasks in question. Morris used this approach in a study of the rated attractiveness of occupations. He developed a reliable measure of relative competence within various occupational clusters which hang together because they presumably require the same general class of abilities, e.g., mechanical, musical, scientific, etc. Within each of the clusters he selected jobs at roughly equivalent points along the consensual difficulty dimension. He assumed that in areas of high competence the jobs with moderate Ps would have high consensual difficulty, while in areas of low competence, jobs with a moderate Ps would fall at the easy end of the consensual difficulty scale. Subjects for whom Ms > Mf were expected to prefer jobs of high consensual difficulty in high competence areas and of low consensual difficulty in low competence areas. The opposite pattern was expected of subjects for whom Mf > Ms. Both sets of predictions were confirmed. Without a consideration of competence differences, relationships between achievement motive patterns and level of occupational aspiration were minimal, a finding which paralleled my experimental study of difficulty preferences where such controls were not applied.

In further work with the competence variable, Shrable and I have been able to show that it has relevance even for the measurement of the achievement motive. We currently assume that the writing of fantasy stories from which the strength of motive is inferred is subject to the same rules as any achievement-related tendency. Thus the latent motive, in combination with subjective expectancies

aroused by picture cues, produces achievement-related tendencies, the strength of which determine the likelihood of appearance of scorable n Achievement content in the fantasies. The absence of achievement fantasy can thus reflect the absence of appropriate expectancies as well as the absence of the motive. Shrable and I selected pictures which were clear with respect to the type of abilities required for good performance on the activities portrayed. Using Morris' measure of competence, we examined differences in amount and type of achievement imagery associated with pictures portraying activities differing in the extent to which the individual felt he possessed the requisite competence. We reasoned that very high competence with respect to activities represented in a picture might be associated with fantasies of unique accomplishments at very high levels of consensual difficulty, such as inventions or discoveries, or alternatively with fantasies of future high level career activities. It should be these kinds of activities for which achievement-related tendencies would be maximal in high competence areas because the moderate risk is represented by these activities when the individual is high in competence. These types of fantasies are a part of the established n Achievement scoring system. For pictures of low competence activities we expected that the immediate and routine demands for simple good performance would approach the moderately difficult range, and that we would find in these fantasies themes presently scored for need achievement simply because they meet the criterion of evidence of concern over competition with standards of excellence. Both expectations were confirmed. Additionally we tentatively anticipated that low competence pictures might show less total scorable n Achievement because there might be no activity, no matter how easy, for which the individual might have a Ps appreciably above zero. This expectation was clearly confirmed for Ss above the median on intelligence. They wrote more n Achievement fantasies in response to high as contrasted to low competence pictures. For low IQ subjects

(high school aged males) the results were just as clear but reversed. We don't have any ready explanation for this reversal but we feel it may represent a clue as to the circumstances under which achievement fantasies may represent substitutive or compensatory fantasy and when they may represent an indication of a persistent latent tendency to seek actively certain classes of incentives. In any event this piece of work suggests that control of the competence variable in measurement of the motive demands further investigation. It may be an important source of error in present measurement of the motive.

I should point out that the modifications of the theory to be put forth by Raynor in the next presentation can deal quite elegantly with most of the results I have just reported, as well as some of the others I will describe.

Another important point on the effects of competence. According to the theory, as presently stated, the strength of the achievement-related tendencies aroused by tasks of the same Ps would be equal, and the fact that they were drawn from areas differing in competence would be irrelevant with respect to the strength of these particular tendencies. However, people have other reasons to succeed, of course, and it is recognized that the total strength of the tendency to perform a task requiring skill includes sub-tendencies associated with other incentives contingent on successful performance. An important fact about many of these "extrinsic" incentives such as social approval, prestige, money, etc. is that the more difficult the task is perceived to be by others, the greater the quality of incentives received as a result of success. In high competence areas, the individual has a relatively high subjective probability of success on tasks of high consensual difficulty (tasks which others see as very difficult) and which consequently offer high "extrinsic" incentive value. Generally speaking, then, "extrinsic" tendencies should be considerably stronger in these areas, because though tasks of equal Ps may arouse equal achievement-related tendencies,

the total tendency should be greater for the task from an area of high competence than of low. Morris found in the previously cited study that almost all of his high school aged students stated a vocational choice which fell in an area of high competence. Subjects for whom Ms > Mf chose from among the jobs of very high consensual difficulty within areas of high competence. This was predictable from the assumption that these are the jobs most closely approaching the Ps .50 point for high competence areas. My argument is that the strong "extrinsic" tendencies aroused by these particular jobs caused them to be preferred to other moderately difficult jobs (in Ps terms) in areas of low or moderate competence. Subjects for whom Mf > Ms also chose in areas of high competence, but they avoided the top level jobs which we assume have a Ps approaching .50. By selecting jobs of moderate consensual difficulty in high competence areas, they were in fact choosing jobs of relatively high subjective probability of success. Thus they were avoiding the moderately difficult level of occupational aspiration, as expected from the theory, while selecting jobs with relatively high extrinsic payoffs for which their probability of attainment was high.

The manner in which the effects of success and failure may be mediated by the competence variable must also be considered. Note that success and failure not only change Ps for tasks at hand but they also change competence, that is, they cause the zero to 1.00 subjective probability range to shift up or down on the consensual difficulty scale. Thus success or failure can have an effect not only on the strength of achievement-related tendencies to perform any act of a given consensual difficulty level, but also they affect the strength of total tendency to perform acts which fall in particular areas of competence through changes in the strength of extrinsic tendencies. Success or failure at some tasks may in fact have tremendous self-diagnostic implications. The information tells the individual the extent to which he can realistically aspire to attain

the highly valued incentives which success at high consensual difficulty levels affords.

Much of what I've been saying depends on the assumption that there are relatively universally perceived, cohesive clusters of abilities and that people do recognize various tasks as falling within such clusters. To the extent that this is not true an assessment of competence within an area is useless. However the reasoning I have presented would assert that the assumption is subject to test. Success or failure on a task of a particular consensual difficulty level would affect the subjective probability of other tasks to the extent to which the second task was seen as requiring the same abilities. Thus the strength of tendencies to perform the second task would be affected in predictable ways if it is the case that the two tasks do indeed fall in the same area of competence. Actually one can reverse the logic and begin to learn about the degree to which tasks are perceived as requiring the same abilities by examining the degree to which success or failure on a given task affects the strength of tendencies aroused by tasks which presumably fall in the same area of competence.

In summary then, competence is an important and measurable mediator of the relationship between the external cues defining difficulty level and the subjective probability values derived. Consequently, it is an important determinant of variations in strength of achievement-related tendencies aroused by any objectively describable external situation. We have seen a number of possible ways in which the influence of the variable can be eliminated or assessed, including its operation in the measurement of the achievement motive itself. A number of studies clearly indicates that effective tests of the theory of achievement motivation are dependent on such steps. Finally I have suggested that insofar as the total strength of tendency to perform an achievement-related act is composed of tendencies aimed at incentives extrinsic to achievement, competence will have

crucial effects on the strength of the total tendency to perform the act to the extent that these extrinsic incentives increase as a function of the consensual difficulty level.